

R E M A R K S

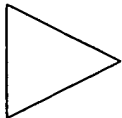
A telephone call was placed to the Examiner regarding the assertion in the Advisory action that the applicant "has not complied with the drawing objection 37 CFR 1.84(p)(4)." This is the objection raised by the Examiner in point 4 of the June 18, 2003 Office action, to the effect that reference character 107 has been used to designate both CRC-16 value for index₀ and index₆₅₅₃₅." The Advisory action also indicated that the status of claim 28-34 was not indicated.

The undersigned was not clear whether the matter was handled in the response filed on September 25, 2003, and agreed to address it in this supplemental amendment, as well as to correct the status indication of claims 28-34. As for the latter, this amendment corrects the deficiency. As for the former, however, it is respectfully submitted that the amendment filed on September 25, 2003 **did address** the objection, traversing it, and providing an explanation of applicant's position. Therefore, it is respectfully submitted that the amendment filed on September 25, 2003 was fully responsive on this matter. The objection, is therefore, traversed.

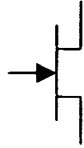
The remarks below are identical to the remarks make in the aforementioned September 25, 2003 response.

Nevertheless, in order to expedite prosecution, FIG. 1 is amended. The Examiner's approval of the amended FIG. 1 is respectfully solicited.

The drawing was objected to because the FIG. 4 storage elements do not have an included legend. Applicant respectfully traverses. Shapes that have a commonly understood meaning do not have to have legends. To illustrate, in the electronics arts the shape



is understood to represent an amplifier, and no legend is required. Many patents show this shape without any additional legends. At times, this shape is even found without either a text legend or a numeral legend. Similarly, the shape



is understood to represent an FET transistor, and no legend is required. Again, many patents show this shape without any additional legends. For the very same reason, the shape



is understood to represent a storage element, and no legend is required.

The drawing was further objected to because, according to the Examiner, the references 103₀, 103₁, 103_{1A} and 103₆₅₅₅₃₅ are not found in the specification. Applicant respectfully traverses, directing the Examiner's attention to page 7, line 20, which refers to the entire range of clusters 103₀ through 103₆₅₅₅₃₅, and to page 8, line 12, which mentions cluster 103_{1A}.

The drawing was still further objected to because reference 107 is used in connection with cluster 103₀ and 103₁, and that both references 105_a and 107 are used to designate index₀. Applicant respectfully traverses.

As to the first, reference 107 is indeed used numerous times in FIG. 1. It refers to cells that are in left column in the overall index table that is composed of index clusters 103₀ through 103₆₅₅₅₃₅. There is no prohibition on labeling identical items with identical labels and, therefore, applicant believes that such labeling is not objectionable.

As for the second, in connection with the overall index table that is composed of clusters, a given cell can be a cell that is viewed relative to it belonging to a given column of the overall index, and can also be viewed relative to it belonging to a particular sub-index (e.g., index₀). In the case of the upper-most left-most cell in FIG. 1 (105_a and 107 designate the cell; not the index) that cell contains a CRC-16 value, and in that capacity, it is appropriate to attach to it label 107. It is also a cell in the first location of the index₀ cluster, and in that capacity, it is appropriate to attach to it label 105_a.

As applicant understands the Rules expressed in 37 CFR, there is no prohibition on labeling an item by more than one means for identifying an item. Indeed, it is a

perfectly common practice to have an item be identified with a legend (e.g., “output filter”) and also identified by a numeral. No particular way for identifying items is mandated and, qualitatively, there is no difference between an item being unambiguously identified by means of a label and a numeral, by means of two numerals, or by any other means – as long as no ambiguity results. Actually, providing more than one legend sometimes **aids** in the understanding of the drawing and of the invention, as is the situation in the instant case.

Claims 1-17 and 1-24 were rejected under 35 USC 102 as being anticipated by Jain, *A comparison of Hashing Scheme for Address Lookup in Computer Networks*, IEEE Transactions on Communications, vol.40, No. 10, October 1992, pg 1570 et seq. Most of the claims are amended herein and, as amended, are believed to be patentable over the Jain reference.

The Examiner pointed to pages 1570 and 1572 of the reference, which encompasses six columns of text. However, in applicant’s view the pointed-to text -- which encompasses sections I-VII of the article, and well as part of section VIII – does NOT teach all that the Examiner asserts it teaches. Section I is merely an introduction. Section II teaches the notion of hashing a record’s key field (specifically in Jain it is an address field), and inserting a pointer in an address corresponding to the hash value that points to a table that contains all of the stored records whose address field yields the same hash value. This is a one-stage redirection. Section III teaches the use of only some of the hashed value bits in organizing the table of pointer. Employing less than all of the hash value bits allows the table to be smaller. Section IV teaches a hashing method that uses “bits from the cyclic redundancy check (CRC) of the address.” In other words, hashing by generating a CRC value, and employing less than all of the bits in creating the pointers table. Section V deals with hashing by using the Fletcher checksum, section VI deals with hashing by using another checksum, section VII deals with hashing by using XOR Folding, and section VIII addresses a mask for the address filter. *Thus, section IV is the only section that deals with CRC values.* The reference does NOT teach or suggest anything other than the aforementioned one-stage redirection where an index table with one entry per location, and that is a pointer to a table of records.

In contradistinction, amended claim 1 specifies an index that stores tuples, and each tuple specifies a record address (as in Jain) and a second field. Jain does not teach or suggest storing tuples with more than one field and, therefore amended claim 1 is not anticipated by Jain. Further, amended claim 1 specifies that the second field contains "at least a portion of a second cyclical redundancy check value determined for the key." Since Jain does not store tuples with more than one field, it is not surprising that Jain does not store tuples where the second field contains the specific information stated above. Therefore, it is respectfully submitted that amended claim 1 is not anticipated by the Jain reference.

Amended claim 1 is similar to the examined claim 7, but the Examiner's explanation for rejecting claim 7 is encompassed in the explanation for rejecting claims 5-13, which explanation states

Regarding claims 5-13, determining a second cyclical redundancy check value...determining a third cyclical redundancy check value for the key [note: page 1571].

Respectfully, that is insufficient to give notice to applicant as to the language in Jain that the Examiner considers anticipatory of the claims. Page 1571 contains the tail portion of section III, the entirety of section IV, and the first three lines of section V. As indicated above, in applicant's view only section IV relates to CRC so, in that sense, the citing of page 1571 is relevant. However, applicant has found no suggestion anywhere (including, in particular, within section IV) of a second CRC value determination for anything, or (for that matter) a third CRC value calculation for anything. Applicant respectfully submits, therefore, that amended claim 1 is not anticipated by Jain. Since amended claim 1 is not anticipated by Jain, it follows that claims 2-20, which depend on claim 1, are also not anticipated by Jain, at least by virtue of this dependence.

Independent amended claim 21 deals with a method for retrieving records and, not unlike amended claim 1, amended claim 21 contains limitations relative to the structure and contents of tuples in the index. Thus, amended claim 21 specifies the steps of:

determining a second cyclical redundancy check value for the key; and

retrieving from a memory pointed to by contents of said index at said position one or more tuples, where each tuple contains an

address field A and a value field, and selecting the address field of a retrieved tuple whose value field is equal to at least a portion of said second cyclical redundancy check value.


In applicant's view, the Jain reference has no teachings or suggestions that even remotely come close to these steps. Therefore, it is respectfully submitted that claim 21, and following outstanding claims, which depend on claim 21, are not obvious in view of Jain.

In addition to the Jain reference, five US Patents were made of record by the Examiner. Those references were reviewed but were found to be contain no subject matter that anticipates or renders obvious the outstanding claims.

In light of the above amendments and remarks, applicant respectfully submits that all of the Examiner's objections and rejections have been overcome. Reconsideration and allowance of the outstanding claims are respectfully solicited.

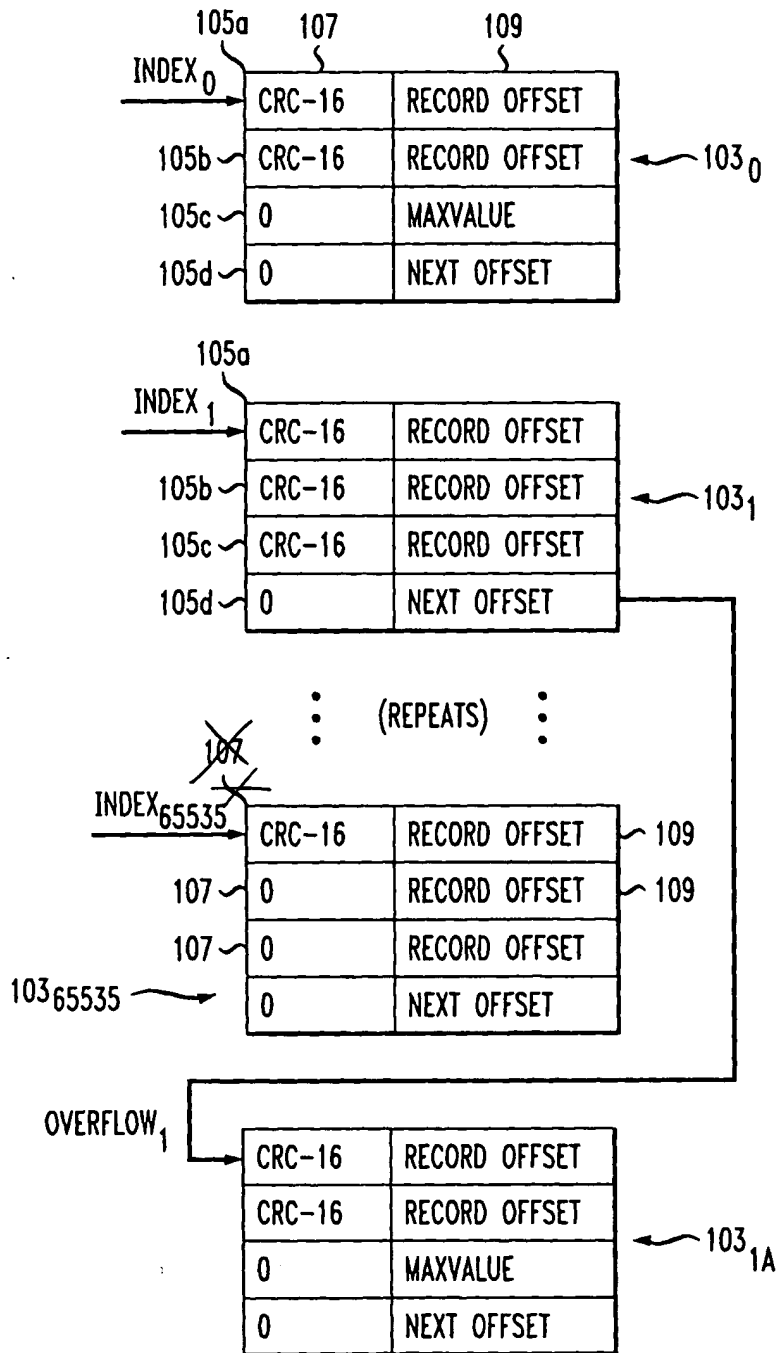
Dated: 1/8/04

Respectfully,
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1/5

FIG. 1

101

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FIG. 1

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